

REMARKS

Applicants have now had an opportunity to consider the office action issued on April 27, 2006. Reconsideration of the Application is respectfully requested.

The Office Action

Claims 2-3, 12, 13, 22, and 23 stand rejected under 35 U.S.C. § 103(a) as being anticipated by Matsuda (U.S. Patent No. 5,973,792) in view of Knox (U.S. Patent No. 6,101,283).

Claims 4-7, 11, 14-17, and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuda in view of Knox, and further in view of Bilgen ("Restoration of Noisy Images Blurred by a Random Point Spread Function").

Claims 8, 9, and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuda in view of Knox, and further in view of Numakura (U.S. Patent No. 5,371,616).

Claims 10 and 20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuda in view of Knox, and further in view of Balanis (*Advanced Engineering Electromagnetics*) and Numakura.

Claim 18 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuda in view of Knox, in view of Bilgen and further in view of Numakura.

Recent Developments

On January 11, 2006, Applicants submitted an after-final amendment including amendments to the claims indicating that that a reflectance value, once determined, would be valid for an entire job of like sheets. The Examiner stated in an advisory action that this limitation would define over the Matsuda reference, but the amendments were not entered because the Examiner believed they would require additional searching. The Applicant filed an RCE on March 1, 2006 and the amendments were entered. The Examiner added the Knox reference to the previous line of rejections in the latest non-final office action, dated April 27, 2006. In a telephone interview on June 28, 2006, the Applicant's attorney and Examiner Thompson agreed that the present amendments define over the combination of Matsuda and Knox.

The Knox Reference

Knox discloses an imaging processing method for mitigating the effects of show-through in scanning multiple two sided pages in book scanning applications.

Knox discloses that

“Different types of paper will have different amounts of show-through. The type of marking, i.e. toner, ink, pen, etc., may also influence the amount of show-through. These different values will not be radically different for normal plain paper. If necessary, a manual adjustment to the amount of show-through correction, i.e. the value of “f”, could be provided to allow the operator to maximize the correction.” (Knox, col. 6, lines 37-43)

In sum, Knox can provide the user with the ability to manually correct the show-through correction to account for the type of paper.

The Claims Distinguish Over the References of Record

Claim 2 now calls for determining normalized reflectance data that is valid for an entire job by averaging over margin areas in which there is no printing on any page and automatically transforming the show-through compensated density data for one or all of the images into show-through compensated reflectance image data that is valid for an entire job by coupling the normalized reflectance data with the show-through compensated density data. Support for this limitation can be found on page 14, lines 18-23 of the Applicant’s original disclosure. The present application determines the normalized reflectance data then uses it in the final show through calculation. These steps are automatic, and do not require the intervention of the user. It automatically makes the normalized reflectance determination from the first few pages scanned.

Knox allows that a user may manually adjust a show-through compensation value depending on observed results, if necessary. The cited portion of the Knox reference, however, does not teach that a normalized reflectance value is determined automatically. Beyond the manual/automatic distinction, Knox does not find a normalized reflectance from known white space in the margins, then couple it with the show through density data.

It is therefore respectfully submitted that **claim 2** and **claims 3-11** dependent therefrom now distinguish patentably and unobviously over the references of record.

Similarly, independent **Claims 12 and 23** have been amended to emphasize the idea of finding normalized reflectance data and automatically using it in the end show-through calculation. As with claim 2 above, Knox allows for manual adjustment of the compensation value, but does not teach finding a normalized reflectance value automatically and using it in the final calculation. It is therefore respectfully submitted that **claims 12 and 23**, as well as **claims 13-22** dependent therefrom distinguish patentably and unobviously over the references of record.

CONCLUSION

For the reasons detailed above, it is submitted all claims remaining in the application (Claims 2-23) are in condition for allowance. The foregoing comments do not require unnecessary additional search or examination.

Although it is believed no fees are due, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 24-0037.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is hereby authorized to call Patrick Roche, at Telephone Number (216) 861-5582.

Respectfully submitted,

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June 29, 2006
Date

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